In the Abstract:

Please enter the attached substitute abstract. A marked-up copy of the abstract, showing the changes made thereto, is also attached.

Remarks

The claims are 1-20, with claim 1 being the sole independent claim. A revised Abstract has also been submitted on a separate sheet pursuant to the Examiner's request. It is submitted that no new matter has been introduced by way of this amendment. Reconsideration of the claims is respectfully requested in light of the following remarks.

Claims 1, 2, 4-10, 12, 14, and 16-20 stand rejected under 35 U.S.C. § 103(a) as being obvious over Burger ("Regiospecific Reactions with ω-carboxy-α-amino acids -- A Simple Synthesis of Aspartame", *Chemmiker Zeitlung*, 1990, 114(7-8), pp. 249-251) and further in view of Claude (U.S. Patent No. 5,510,508). Applicant again respectfully traverses this rejection.

The present invention relates to the synthesis of N-[N-(3,3-dimethylbutyl)-L-α-aspartyl]-L-phenylalanine 1-methyl ester (neotame) via novel oxazolidinone derivatives. According to the present invention, neotame is synthesized by reacting N-(3,3-dimethylbutyl)-L-aspartic acid and a carbonyl compound in a solvent for a time and at a temperature sufficient to produce an oxazolidinone derivative. Next, the oxazolidinone derivative is reacted with phenylalanine or phenylalanine methyl ester in a solvent for a time and at a temperature sufficient to produce neotame. The solvents used in the first and second steps can be the same.

The present invention provides a great advantage in the production of neotame since oxazolidinone derivatives are used as starting materials rather than aspartame which requires purification and isolation prior to use in food grade sweetener preparation. In addition, both steps can be carried out in one pot with the same solvent, which increases yield (handling losses minimized) and reduces cost (fewer steps, less processing time). The overall result is more efficient and cost-effective methods of preparing high purity neotame from readily available or readily obtainable materials.

The Examiner maintains that Burger teaches the same process as presently claimed, but with an analogous starting material. The Examiner further maintains that, by virtue of Claude's teaching similar structures for neotame and aspartame, one of ordinary skill in the art would have trivially modified the process of Burger to produce neotame. Applicant respectfully disagrees with the Examiner's position.

Burger starts with L-aspartic acid; L-aspartic acid is a primary amino acid. As presently claimed, the starting material is N-(3,3-dimethylbutyl)-L-aspartic acid; N-(3,3-dimethylbutyl)-L-aspartic acid is a bulky or hindered secondary amine. Applicant submits that L-aspartic acid and N-(3,3-dimethylbutyl)-L-aspartic acid are not analogous materials at all; the substitution of one for the other could hardly be deemed "trivial" by one of ordinary skill in this art.

The implications of such a substitution could be profound. These compounds can and often do behave very differently. The bulky neohexyl group present in N-(3,3-dimethylbutyl)-L-aspartic acid can produce dramatically different results as compared with results obtained using a simple primary amino acid such as L-aspartic acid. In fact, the presence of such a bulky neohexyl group would drastically lower the

expectation of obtaining the same results obtained when using a material without the bulky neohexyl group. Those of ordinary skill in this art would, therefore, be unlikely to have any reasonable expectation of success in substituting N-(3,3-dimethylbutyl)-L-aspartic acid for L-aspartic acid in a given reaction. Accordingly, Applicant submits that the presently claimed invention is not obvious in light of the cited art and respectfully requests withdrawal of the §103 rejection.

This Amendment After Final Rejection is believed clearly to place this application in condition for allowance. Its entry is therefore believed proper under 37 C.F.R. §1.116. Accordingly, entry of this Amendment After Final Rejection, as an earnest attempt to advance prosecution, is respectfully requested. Should the Examiner believe that issues remain outstanding, the Examiner is respectfully requested to contact Applicant's undersigned attorney in an effort to resolve such issues and advance the case to issue.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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VERSION SHOWING CHANGES MADE TO ABSTRACT

ABSTRACT

Synthesis of N-[N-(3,3-dimethylbutyl)-L-α-aspartyl]-L-phenylalanine 1-methyl ester [is produced using novel] by treating N-(3,3-dimethylbutyl)-L-aspartic acid with aldehydes or ketones to give oxazolidinone derivatives, which are condensed with L-phenylalanine methyl ester.